

Circular Economy and Circular Business Models in Sports

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Circular Economy

Circular economy is a countermovement to the current linear 'take-make-dispose' industrial model (Ellen MacArthur Foundation, 2013) that addresses the increasing exploitation of environmental resources (Lieder & Rashid, 2016). It is conceptualized as a self-containing closed-loop system, which is directed toward **zero-waste by maximizing reuse, repair, remake, and recycling practices paired with minimizing consumption practices** (Jackson, 2009). Circular economy builds on established schools of thought. Amongst those are the **cradle-to-cradle design** - that consists of the principle that all materials are always nutrients for something else in a healthy and safe metabolism (McDonough & Braungart, 2002); **laws of ecology** - showing that everything is connected (Commoner, 1971); **regenerative design** - a process-oriented whole systems approach to design (Lyle, 1994); **industrial ecology** – modelling a network of industrial processes that extract resources from the earth (Graedel & Allenby, 1995); **biomimicry** (Benyus, 2002)—trying to mimic a natural system by conserving and reusing resources; and the **blue economy**—the sustainable use of ocean resources for economic growth and improved livelihoods while preserving the health of the ocean ecosystem (Pauli, 2010).

Value in the circular economy includes **environmental as well as economic sustainability** (Geissdoerfer, Savaget, Bocken, & Hultink, 2017; Kirchherr, Reike, & Hekkert, 2017; Lieder & Rashid, 2016) and further employs a **social perspective**. This triad is called the **triple-bottom-line value system (TBL-VS)** (Geissdoerfer et al., 2017; Ghisellini, Cialani, & Ulgiati, 2016; Kirchherr et al., 2017; Murray, Skene, & Haynes, 2017). For example, the outdoor apparel brand Patagonia not only discourages customers from unnecessary purchases to eliminate unnecessary consumption but the firm is also engaging in environmental activism to protect scarce natural resources (e.g., tropical forest). In addition, the company has a unique internal social policy allowing employees to pursue leisure activities during office hours and offering childcare at the work place (Chouinard, 2006). The term triple-bottom-line is credited to John Elkington, who first discussed 'win-win-win strategies' benefiting companies, customers and

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the environment (Elkington, 1994). The idea of circular economy seeks radical change of fundamental principles on a system level. It moves business practices toward **environmental stewardship** and **social progress** while generating **economic profit** (Fehrer and Wieland, 2020).

Figure 1: *Balanced Triple-Bottom-Line in Circular Economy*



Circular Business Models in Sport Management

The TBL-VS applies also to different domains of activity in sport management. However, few sport organisations embrace all three dimensions to the same extent. **Social aspects** of the triple bottom line have been at the forefront of sustainability concerns in sport over **several decades**, for example in the context of professional sport organisations like professional football clubs or sport federations (Babiak & Wolfe, 2009; Zeimers et al., 2019) or through Sport4Development initiatives (Schulenkorf, 2010). However, in the past few years,

there has also been a **rising interest in environmental sustainability** in sport management (McCullough et al., 2016).

Sport events, whether in fixed venues or in ephemeral locations during on-off events, are an example of where sport organisations start to seek **achieving the triple-bottom-line**, e.g. at the Olympics. However, the major step towards the triple bottom line in **hosting mega sport events** was triggered mainly by changes in the rules of hosting sport events than to a willingness of sport organizations to change. Now, business practices in relation to the Olympics have to ensure economic, ecological and social sustainability as the International Olympic committee requires it. **Event-related** social, economic and ecological **changes** are recognized as **legacy** (Thomson, Schlenker & Schulenkorf 2013, Preuss 2015).

Circular business models show how firms and sport organisations can direct their business activities toward zero-waste. However, much of the literature is still grounded in a firm-centered logic. **Many circular business models** focus only on the production process and how, for example, water can be saved or plastic can be reused to be more cost effective. Sustainability or social progress are often viewed as **favorable by-products**. In sport management, we call this a **logic of sport products** (Woratschek & Griebel 2020). Arguably, the logic of sport products overvalues the activities of single firms designing and manufacturing sustainable products. This view **falls short** in addressing the **complexity of sustainable issues** that go **beyond the boundaries of the firm** and include more than just the immediate stakeholders of a firm network. This is why the **logic of value co-creation** in sport management offers a **better theoretical foundation for circular business models** in sport management (Woratschek 2020).

Fehrer and Wieland (2020) respond to this somewhat short-sighted perspective of value capture anchored in many circular business model frameworks and promote a **logic of value co-creation** that emphasizes the **important role of business partners and other stakeholders**, including the government, environmental activist, waste management companies and the broader public when transitioning toward sustainability. The logic of value co-creation in the context of circular economy offers a broader view and extends the overemphasized monetary and **economic aspects of value capture** by **including environmental and social dimensions of value** (Fehrer and Wieland, 2020).

Fehrer and Wieland (2020) identified four value co-creation mechanisms anchored in circular business models.

- (1) **Optimizing material-technical loops** through closing, slowing and narrowing biological and technical lifecycles (Bocken et al., 2016). Adidas, for example, has

launched a sneaker made from virgin plastic that can be reused to make the same shoe over and over again (see Adidas, the futurecraft.loop).

(2) Transforming product ownership into services through renting and leasing (Esposito et al., 2018). For example, with the increasing interest in bicycle and e-bikes, new rental systems, such as the Velib' system in Paris are on the rise providing customers with temporary use of bikes or e-bikes.

(3) Sharing resources and thereby using underutilized assets (Todeschini et al., 2017). Repairing instead of buying new sports equipment has become the business of two former Rossignol employees. They launched a business aiming at repairing old snowboards. The entrepreneurs partner with Rossignol to share and collaboratively develop research, knowledge and innovation.

(4) Shaping symbiotic ecosystems, where different stakeholders collectively drive circular practices (Gallo, Antolin-Lopez & Montiel, 2018). The relatively new sportswear firm Outerknown has teamed up with Levi's to design and produce a new sustainable fashion line from recycled cotton. The firms join forces to reuse recycled material in their supply chain and create fully recyclable new clothes.

The broader focus on the TBL-VS, deeply anchored in the principles of circular economy, highlights the importance of also viewing the value creation mechanisms in circular business models from a truly **systemic perspective**. The sports industry exemplifies many sustainability challenges – and circular business opportunities – spanning the entire production and use range of sports gear and sportswear, from the design and the production of fibers to the disposal of used garments. These challenges affect **broad sets of actors inside and outside of the sport industry**, including farmers, manufacturers, retailers, product and fashion designers, waste management companies, influencers, and customers. Consequently, to face these challenges in a truly systemic manner, the logic of value co-creation is essential.

To put it in a nutshell:

1. Circular economy implies a **triple-bottom-line value system** that includes economic, environmental and social sustainability.
2. **Circular business models** describe **how** firms and sport organisations direct their practices to a **triple-bottom-line value system**.
3. In **sport management**, there is a **rising interest** in **environmental sustainability**.
4. Sport organisations of **mega sport events** seek to achieve the **triple-bottom-line**.
5. **Event-related** social, economic and ecological **changes** are recognized as **legacy**.

6. **Firm-centered circular business models** regard sustainability as favorable by-products and therefore correspond to the **logic of sport products**.
7. The logic of sport products **falls short in addressing the complexity of sustainability** that goes beyond the boundaries of the firm.
8. The **logic of value co-creation** better grasps the **systemic nature of circular economy** that includes **actors inside and outside of the sport industry**.
9. Circular business models in the logic of **value co-creation** comprise **economic, environmental and social dimensions of value**.
10. Co-created value in circular business models can be achieved through (1) **optimizing material-technical loops**, (2) **transforming product ownership into services**, (3) **sharing resources** and (4) **shaping symbiotic ecosystems**.

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